

IN THE CLAIMS:

1. (Canceled)

2. (Canceled)

3. (Canceled)

4. (Canceled)

5. (Canceled)

6. (Canceled)

7. (Canceled)

8. (Canceled)

9. (Canceled)

10. (Canceled)

11. (Canceled)

12. (Canceled)

13. (Canceled)

14. (Canceled)

15. (Canceled)

16-22. (Canceled)

23. (Previously Presented) A retroviral vector for carrying a target gene specific insert into a cell in order to modify the expression of a target gene having a sense strand and an antisense strand, comprising:

(a) a U6 promoter having a sequence of:

ttcccatgattccttcataatttgcataacgatacaaggctgtagagagataattagaattaatttgactgtaaacacaaagatattagtacaa
aatacgtgacgtagaaagtaataatttctgggtagttgcagtttttaaattatgttttaaatggactatcatatgcttaccgta
acttgaaagtatttcgatttctgcctttatatacttgtggaaaggacgaaacaccg (SEQ ID NO:7);

(b) a polylinker region comprising a nucleotide sequence of gatcc gctgggactcctttgcatg
ttcaagaga catgcaaaggagtcccagc ttttt ggaa a (SEQ ID NO:4)

(c) a target gene specific insert comprising double stranded RNA, wherein said double stranded RNA comprises a sense portion that is complementary to a portion of the antisense strand of the target gene, and an antisense portion that is complementary to the sense portion, so that the sense portion and antisense portion anneal, and the double stranded RNA folds back upon itself.

24. (Previously Presented) The retroviral vector of Claim 23, wherein the sense and antisense regions of the target gene specific insert each comprise a length of 19-30 nucleotides.

25. (Previously Presented) The retroviral vector of Claim 24, wherein the sense and antisense regions of the target gene specific insert each comprise a length of 19-25 nucleotides.

26. (Previously Presented) The retroviral vector of Claim 25, wherein the sense and antisense regions of the target gene specific insert each comprise a length of 19-23 nucleotides.

27. (Previously Presented) A modified Lentivirus vector for carrying double stranded RNA into a cell in order to modify the expression of a target gene having a sense strand and an antisense strand, wherein:

(a) the endogenous CMV promoter of the Lentivirus has been removed, said modified Lentivirus vector comprising:

(i) a REV element that binds to a REV response element (RRE) is inserted;

(ii) a U6 promoter sequence of

ttcccatgattccttcattatgtgcatatacagatacaaggctgtagagagataattagaattaatttgactgtaaacacaaagatattagtacaaaatacgt
gacgtagaaagtaataatttcttgggtagtttgcagtttttaaaattatgttttaaaatggactatcatatgcttaccgtaacttgaaagtatttcgatttcttgc
ctttatatatcttggtaaaggacgaaacaccg (SEQ ID NO:7); and

(b) a polylinker region comprising a nucleotide sequence of: gatcc gctgggactcctttgcatg
ttcaagaga catgcaaaggagtcccagc tttt ggaa a (SEQ ID NO:4);

wherein said double stranded RNA comprises a sense portion that is complementary to a portion of the antisense strand of the target gene, and an antisense portion that is complementary to the sense portion so that the sense portion and antisense portion anneal, and the double stranded RNA folds back upon itself.

28. (Previously Presented) The modified Lentivirus vector of Claim 27, further comprising a reporter gene.

29. (Previously Presented) The modified Lentivirus vector of Claim 27, wherein said reporter gene is selected from the group consisting of Blasti and hrGFP.

30. (Previously Presented) The modified Lentivirus vector of Claim 29, wherein said vector is pLenti-U6-Blasti, which comprises the nucleotide sequence of SEQ ID NO:8.

31. (Previously Presented) A modified lentivirus pLenti-U6-Blasti, comprising the nucleotide sequence of SEQ ID NO:8.

32. (Previously Presented) A cell transformed or transfected with the modified lentivirus of Claim 31.